Amendment to the Claims:

This listing of claims will replace all previous versions, and listings, of claims in this application.

Listing of Claims:

1. (Currently amended) A compound having the formula I

$$R \xrightarrow{P} X \xrightarrow{X} Q \times (R^4)_n$$
(I)

wherein:

Z is N:

Y is CONR⁵, NR⁵CO, SO₂NR⁵, NR⁵SO₂, CH₂NR⁵, NR⁵CONR⁵, CH₂CO, CO or CH₂O; X is [[CH or]] N;

P is phenyl or a 5 or 6 membered heteroaromatic ring containing one or more heteroatoms selected from N, O or S and said phenyl ring or 5 or 6 membered heteroaromatic ring may optionally be fused with a 5 or 6 membered saturated, partially saturated or unsaturated ring containing atoms independently selected from C, N, O or S;

Q is C_1 -6alkyl, C_2 -6alkenyl or C_2 -6alkynyl;

 $\label{eq:cho_state} R is CHO, fluoromethoxy, difluoromethoxy, trifluoromethoxy, $C_{0.6}$alkyl(O_2)NR1R^2, $OC_{1.6}$alkyl($O)NR1R^2, $C_{1.6}$alkyl($O)NR1R^2, $C_{0.6}$alkylNR$^1($O)R$^2, $OC_{1.6}$alkylNR$^1($O_2$)R$^2, $OC_{1.6}$alkylNR$^1($O_2$)R$^2, $C_{0.6}$alkylNR$^1($O_2$)C_{1.6}$alkylNR1R^2, $OC_{1.6}$alkylNR1R^2, $C_{0.6}$alkyl(O_2)C_{1.6}$alkylNR1R^2, $OC_{1.6}$alkylNR1R^2, $OC_{1.6}$alkylNR$^2, $OC_{1.6}$al$

 $C_{0-6}alkylNR^{10}R^{11}, C_{0-6}alkylO(CO)R^{11}, OC_{1-6}alkylO(CO)R^{1}, C_{0-6}alkylC(NR^{10})NR^{10}R^{11}; \\ C_{0-6}alkylC(NR^{11})N(R^{10})_2, OC_{0-6}alkylC(NR^{1})NR^{1}R^{2}, C_{0-6}alkylNR^{10}(CO)OR^{11}; \\ OC_{1-6}alkylNR^{1}(CO)OR^{2}, C_{0-6}alkylNR^{11}(CO)OR^{10}, OC_{1-6}alkylCN, NR^{1}OR^{2}, C_{0-6}alkyl(CO)OR^{8}; \\ OC_{1-6}alkyl(CO)OR^{1}, NR^{1}(CO)NR^{1}R^{2}, NR^{1}(CO)(CO)R^{2}, NR^{1}(CO)(CO)NR^{1}R^{2}, OR^{12} \text{ or } SO_{2}R^{1}; \\ R^{1} \text{ and } R^{2} \text{ are independently selected from hydrogen, } C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkylnyl, \\ C_{0-6}alkylC_{3-6}cycloalkyl, C_{0-6}alkylheterocycloalkyl, C_{1-6}alkylNR^{6}R^{7}, C_{0-6}alkylaryl \text{ and } \\ C_{0-6}alkylheteroaryl, \text{ wherein any } C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{0-6}alkylC_{3-6}cycloalkyl, \\ C_{0-6}alkylheterocycloalkyl, C_{0-6}alkylaryl, C_{0-6}alkylheteroaryl \text{ may be substituted by one or more } A; \\ R^{1} \text{ and } R^{2} \text{ may together form a substituted 5 or 6 membered heterocyclic ring containing one or } C^{1} \text{ and } R^{2} \text{ may together form a substituted 5} \text{ or 6 membered heterocyclic ring containing one or } C^{1} \text{ and } R^{2} \text{ may together form a substituted 5} \text{ or 6 membered heterocyclic ring containing one or } C^{1} \text{ and } R^{2} \text{ may together form a substituted 5} \text{ or 6 membered heterocyclic ring containing one or } C^{1} \text{ and } R^{2} \text{ may together form a substituted 5} \text{ or 6 membered heterocyclic ring containing one or } C^{1} \text{ and } R^{2} \text{ may together form a substituted 5} \text{ or 6 membered heterocyclic ring containing one or } C^{1} \text{ and } R^{2} \text{ or 6} \text{ or 6} \text{ membered heterocyclic ring containing one } C^{1} \text{ or 6} \text{ or 6} \text{ membered heterocyclic ring containing one } C^{1} \text{ or 6} \text{ or 6$

R¹ and R² may together form a substituted 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O or S, which heterocyclic ring may be optionally substituted by A;

 R^3 is independently selected from halogen, nitro, CHO, $C_{0.6}$ alkylCN, $OC_{1.6}$ alkylOR 6 , $OC_{1.6}$ alkylOR 6 , fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, $C_{0.6}$ alkylNR $^6R^7$, $OC_{1.6}$ alkylNR $^6R^7$, $OC_{1.6}$ alkylOC $_{1.6}$ alkylNR $^6R^7$, NR $^6OR^7$, $C_{0.6}$ alkylCO $_{2}R^6$, $OC_{1.6}$ alkylCO $_{2}R^6$, $C_{0.6}$ alkylCONR $^6R^7$, $OC_{1.6}$ alkylNR $^6(CO)R^7$, $OC_{1.6}$ alkylNR $^6(CO)R^7$, $O(CO)NR \,^6R^7$, $OC_{1.6}$ alkylNR $^6(CO)R^7$, $O(CO)NR \,^6R^7$, $OC_{1.6}$ alkylNR $^6(CO)R^7$, $O(CO)NR \,^6R^7$, $OC_{1.6}$ alkylCOR 6 , $OC_{1.6}$ alkylCOR 6 , $OC_{1.6}$ alkylCOR 6 , $OC_{1.6}$ alkylCOR 6 , $OC_{1.6}$ alkylNR $^6(CO)(CO)R \,^6$, $OC_{0.6}$ alkyl(SO $_{2}$)NR $^6R^7$, $OC_{1.6}$ alkylNR $^6(CO)(CO)R \,^6$, $OC_{1.6}$ alkyl(SO)NR $^6R^7$, $OC_{1.6}$ alkylNR $^6(SO)_{2}$ alkylSO 6 , $C_{0.6}$ alkylSO

R⁴ is independently selected from halogen, nitro, CHO, CN, OC₁₋₆alkylCN, OR⁶, OC₁₋₆alkylOR⁶, fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, NR⁶R⁷, OC₁₋₆alkylNR⁶R⁷, NR⁶OR⁷, CO₂R⁶, OC₁₋₆alkylCO₂R⁶, CONR⁶R⁷, OC₁₋₆alkylNR⁶(CO)R⁷, NR⁶(CO)R⁷, NR⁶(CO)NR⁶R⁷, NR⁶(CO)OR⁷, NR⁶(CO)OR⁶, O(CO)OR⁶, O(CO)R⁶, COR⁶, OC₁₋₆alkylCOR⁶, NR⁶(CO)(CO)R⁶,

NR⁶(CO)(CO)NR⁶R⁷, SR⁶, (SO₂)NR⁶R⁷, OC₁₋₆alkylNR⁶(SO₂)R⁷, OC₀₋₆alkyl(SO₂)NR⁶R⁷, (SO)NR⁶R⁷, OC₁₋₆alkyl(SO)NR⁶R⁷, SO₃R⁶, NR⁶(SO₂)NR⁶R⁷, NR⁶(SO)R⁷, OC₁₋₆alkylNR⁶(SO)R⁷, OC₀₋₆alkylSO₂R⁶, SO₂R⁶, SO₂R⁶, SOR⁶, C₃₋₆cycloalkyl, phenyl, a 5 or 6 membered heteroaromatic ring containing one or more heteroatoms independently selected from N, O, or S, or a 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O, or S which heterocyclic group may be saturated or unsaturated, and said phenyl ring or 5 or 6 membered heteroaromatic ring or 5 or 6 membered heterocyclic ring may optionally be fused with a 5 or 6 membered saturated, partially saturated or unsaturated ring containing atoms independently selected from C, N, O or S wherein any C₃₋₆cycloalkyl, phenyl, 5 or 6 membered heteroaromatic ring with one or two heteroatoms selected independently from N, O, or S or a 5 or 6 membered heterocyclic containing one or two heteroatoms selected independently from N, O, or S; may be optionally be substituted by one or more A;

m is $0, \frac{1}{2}, \frac{3}{3}$ or $\frac{4}{3}$;

n is 0, 1, 2, 3 or 4;

R⁵ is hydrogen or C₁-6alkyl

R⁶ and R⁷ are independently selected from hydrogen, C₁-₆alkyl, C₂-₆alkenyl, C₂-₆alkynyl, C₀-₆alkylC₃-₆cycloalkyl, C₀-₆alkylaryl, C₀-₆alkylheteroaryl and C₁-₆alkylNR⁸R⁹;

 R^6 and R^7 may together form a substituted 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O or S, which heterocyclic ring may be optionally substituted by A and wherein a CH_2 group may optionally be replaced by a CO group; R^8 and R^9 are independently selected from hydrogen, $C_{1\text{-}6}$ alkyl, $C_{2\text{-}6}$ alkenyl, $C_{2\text{-}6}$ alkynyl, $C_{0\text{-}6}$ alkyl $C_{3\text{-}6}$ cycloalkyl, $C_{0\text{-}6}$ alkylaryl and $C_{0\text{-}6}$ alkylheteroaryl;

R⁸ and R⁹ may together form a 5 or 6 membered heterocyclic ring containing one or more heteroatoms selected from N, O or S, which heterocyclic ring may be optionally substituted by A;

 R^{10} is hydrogen, $C_{1\text{-}6}$ alkyl, $C_{2\text{-}6}$ alkenyl, $C_{2\text{-}6}$ alkynyl, $C_{0\text{-}6}$ alkyl $C_{3\text{-}6}$ cycloalkyl, $C_{0\text{-}6}$ alkylaryl, $C_{0\text{-}6}$ alkylheteroaryl or $C_{1\text{-}6}$ alkyl NR^8R^9 ; R^{11} is $C_{1\text{-}6}$ alkyl NR^8R^9 ;

R¹⁰ and R¹¹ may together form a 5 or 6 membered heterocyclic ring containing one or more heteroatoms selected from N, O or S, which heterocyclic ring may be optionally substituted by A;

 R^{12} is a 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O or S, which heterocyclic ring may be optionally substituted by A; wherein any $C_{1\text{-}6}$ alkyl, $C_{2\text{-}6}$ alkenyl, $C_{2\text{-}6}$ alkynyl, $C_{0\text{-}6}$ alkyl $C_{3\text{-}6}$ cycloalkyl, $C_{0\text{-}6}$ alkylheterocycloalkyl, $C_{0\text{-}6}$ alkylaryl, $C_{0\text{-}6}$ alkylheteroaryl defined under R^5 to R^{12} may be substituted by one or more A; A is halo, oxo (=O), nitro, CHO, CN, OR^6 , $C_{1\text{-}6}$ alkyl, $C_{2\text{-}6}$ alkenyl, $C_{2\text{-}6}$ alkynyl, $C_{0\text{-}6}$ alkyl $C_{3\text{-}6}$ cycloalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, $C_{0\text{-}6}$ alkyl NR^6R^7 , $OC_{1\text{-}6}$ alkyl NR^6R^7 , CO_2R^8 , $CONR^6R^7$, NR^6 (CO) R^6 , $O(CO)R^6$, COR^6 , SR^6 , $(SO_2)NR^6R^7$, $(SO)NR^6R^7$, SO_3R^6 , SO_2R^6 or SOR^6 ; as a free base or a pharmaceutically acceptable salt, solvate or solvate of a salt thereof.

Claim 2 (cancelled).

- 3. (Currently amended) A compound according to claim $\underline{1}$ [[2]], wherein R^1 and R^2 in C_{0-6} alkyl(SO_2)NR 1 R 2 together form a substituted 5 or 6 membered heterocyclic ring containing one or more heteroatoms selected from N, O or S.
- 4. (Original) A compound according to claim 3, wherein said heterocyclic ring comprises one or more N heteroatoms and said heterocyclic ring is optionally substituted by A, preferably a C_{1-6} alkyl.
- 5. (Currently amended) A compound according to any one of claims [[1 to 4]] 1, 3 or 4, wherein Y is CONR⁵; R⁵ is hydrogen; Q is C₁₋₆alkyl; R⁴ is selected from: phenyl, 5 or 6 membered heteroaromatic ring containing one or more heteroatoms independently selected from N, O, or S

or a 5 or 6 membered heterocyclic ring containing one or two heteroatoms selected independently from N, O, or S which heterocyclic group may be saturated or unsaturated, CN, OR⁶, SO₂R⁶, NR⁶(CO)R⁷, (SO₂)NR⁶R⁷, and CONR⁶R⁷; and n is 1; said phenyl or 5 or 6 membered heterocyclic ring optionally substituted by A.

- 6. (Original) A compound according to claim 5, wherein A is selected from OR^6 , C_{1-6} alkyl, oxo (=O) and nitro; and R^6 and/or R^7 is selected from C_{1-6} alkyl and hydrogen.
- 7. (Currently amended) A compound which is
- 3-Amino-*N*-(2-cyanoethyl)-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxamide;
- 3-Amino-*N*-(3-amino-3-oxopropyl)-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxamide;
- 3-Amino-*N*-(2-nitrobenzyl)-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxamide;
- 3-Amino-N-(2-methoxybenzyl)-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxamide;
- 3-Amino-*N*-(3-morpholin-4-ylpropyl)-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxamide;
- 3-Amino-*N*-[3-(4-methylpiperazin-1-yl)propyl]-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxamide;
- as a free base or a pharmaceutically acceptable salt, solvate or solvate of a salt thereof;
- 3-Amino-*N*-(2-morpholin-4-ylethyl)-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxamide hydrochloride;
- 3-Amino-*N*-[2-(1*H*-imidazol-4-yl)ethyl]-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxamide hydrochloride;
- 3-Amino-*N*-[3-(1*H*-imidazol-1-yl)propyl]-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxamide hydrochloride;
- 3-Amino-6-{4-[(4-methylpiperazin-1-yl)sulfonyl]phenyl}-*N*-(2-thien-2-ylethyl)pyrazine-2-carboxamide hydrochloride;

- 3-Amino-6-{4-[(4-methylpiperazin-1-yl)sulfonyl]phenyl}-*N*-(thien-2-ylmethyl)pyrazine-2-carboxamide hydrochloride;
- 3-Amino-*N*-(2-methoxyethyl)-6-{4-[(4-methylpiperazin-1-yl)sulfonyl]phenyl}pyrazine-2-carboxamide hydrochloride;
- 3-Amino-*N*-(3-methoxypropyl)-6-{4-[(4-methylpiperazin-1-yl)sulfonyl]phenyl}pyrazine-2-carboxamide hydrochloride;
- 3-Amino-6-{4-[(4-methylpiperazin-1-yl)sulfonyl]phenyl}-*N*-[3-(2-oxopyrrolidin-1-yl)propyl]pyrazine-2-carboxamide hydrochloride;
- 3-Amino-*N*-(cyanomethyl)-6-{4-[(4-methylpiperazin-1-yl)sulfonyl]phenyl}pyrazine-2-carboxamide dihydrochloride;
- 3-Amino-6-[4-[(4-methyl-1-piperazinyl)sulfonyl]phenyl]-*N*-[2-(1*H*-pyrrol-1-yl)ethyl]-2-pyrazinecarboxamide hydrochloride;
- 3-Amino-6-[4-[(4-methyl-1-piperazinyl)sulfonyl]phenyl]-*N*-[2-(methylsulfonyl)ethyl]-2-pyrazinecarboxamide hydrochloride;
- *N*-[2-(Acetylamino)ethyl]-3-amino-6-[4-[(4-methyl-1-piperazinyl)sulfonyl]phenyl]-2-pyrazinecarboxamide hydrochloride;
- 3-Amino-6-[4-[(4-methyl-1-piperazinyl)sulfonyl]phenyl]-*N*-[2-(2-oxo-1-imidazolidinyl)ethyl]-2-pyrazinecarboxamide hydrochloride;
- 3-Amino-*N*-[2-(aminosulfonyl)ethyl]-6-[4-[(4-methyl-1-piperazinyl)sulfonyl]phenyl]-2-pyrazinecarboxamide hydrochloride;
- or as a free base or an alternative pharmaceutically acceptable salt, solvate or solvate of a salt thereof[[;]].
- 8. (Currently amended) A pharmaceutical formulation comprising as active ingredient a therapeutically effective amount of the compound according to any one of claims 1 or [[to]] 7 in association with pharmaceutically acceptable carriers or diluents.

- 17. (Currently amended) A method of prevention and/or treatment of conditions associated with glycogen synthase kinase-3, comprising administrating administering to a mammal, including man in need of such prevention and/or treatment, a therapeutically effective amount of a compound of formula I as defined in any one of claims 1 or [[to]] 7.
- 18. (Currently amended) A method of prevention and/or treatment of dementia, Alzheimer's Disease, Parkinson's Disease, Frontotemporal dementia Parkinson's Type, Parkinson dementia complex of Guam, HIV dementia, diseases with associated neurofibrillar tangle pathologies and dementia pugilistica, comprising administrering administering to a mammal, including man in need of such prevention and/or treatment, a therapeutically effective amount of a compound of formula I as defined in any one of claims 1 or [[to]] 7.
- 19. (Original) The method according to claim 18, wherein the prevention and/or treatment is for Alzheimer's Disease.
- 20. (Currently amended) A method of prevention and/or treatment of amyotrophic lateral sclerosis, corticobasal degeneration, Down syndrome, Huntington's Disease, postencephelatic postencephalitic parkinsonism, progressive supranuclear palsy, Pick's Disease, Niemann-Pick's Disease, stroke, head trauma and other chronic neurodegenerative diseases, Bipolar Disease, affective disorders, depression, schizophrenia, cognitive disorders, hair loss and contraceptive medication, Type I and Type II diabetes, diabetic neuropathy and diabetes related disorders, comprising administrering administering to a mammal, including man in need of such prevention and/or treatment, a therapeutically effective amount of a compound of formula I as defined in any one of claims 1 or [[to]] 7.

- 21. (Currently amended) The method according to claim 18, wherein the prevention and/or treatment is <u>of Type I [[and]] or Type II diabetes</u>, diabetic neuropathy [[and]] <u>or diabetes</u> related disorders.
- 22. (Currently amended) A method of prevention and/or treatment of predemented states, Mild Cognitive Impairment, Age-Associated Memory Impairment, Age-Related Cognitive Decline, Cognitive Impairment No Dementia, mild cognitive decline, mild neurocognitive decline, Late-Life Forgetfulness, memory impairment and cognitive impairment, vascular dementia, dementia with Lewy bodies, Frontotemporal dementia and androgenetic alopecia, comprising administrering administering to a mammal, including man in need of such prevention and/or treatment, a therapeutically effective amount of a compound of formula I as defined in any one of claims 1 or [[to]] 7.
- 23. (Original) A process for the preparation of a compound of formula **I** according to claim 1, wherein Y, X, Z, P, Q, R, R¹, R², R³, R⁴, R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰, R¹¹, R¹², A, m and n are defined as in formula **I**, comprising of de-halogen coupling of a compound of formula **IV** with an appropriate aryl species;

Hal
$$X \rightarrow P$$

$$Q \rightarrow Q \rightarrow (R^4)_n$$

$$(IV)$$

$$(IV)$$

$$(I)$$

to give a compound of formula I.

24. (Original) A process for the preparation of a compound of formula I according to claim 1, wherein Y, X, Z, P, Q, R, R¹, R², R³, R⁴, R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰, R¹¹, R¹², A, m and n are defined as in formula I, comprising reacting of a compound of formula XXII:

Polystyrene
$$R \xrightarrow{Z} NH_{2}$$

$$R \xrightarrow{Q} (R^{4})_{n}$$

$$(XXII)$$

$$(I)$$

wherein the reaction is being performed by activation of a compound of formula **XXII** by treatment with a coupling agent or with an acyl halide reagent followed by treatment with the appropriate amine, followed by cleavage of the solid phase moiety by treatment with an suitable acid in a suitable solvent, and where the reaction temperature is between 0 °C and reflux, to give a compound of formula **I**.

25 and 26. (cancelled)

- 27. (Original) A compound which is
- 4-(Pyrrolidin-1-ylsulfonyl)phenylboronic acid;
- 4-[(4-Methylpiperazin-1-yl)sulfonyl]phenylboronic acid;
- as a free base or a salt, solvate or solvate of a salt thereof.

28. (Original) A compound of formula IV

Hal
$$X \longrightarrow X^{NH_2}$$

$$Q \longrightarrow (R^4)_n$$

$$(IV)$$

wherein

Y is CONR⁵, NR⁵CO, SO₂NR⁵, NR⁵SO₂, CH₂NR⁵ NR⁵CONR⁵, CH₂CO, CO or CH₂O; X is CH or N;

Z is N;

Q is C_1 -6alkyl, C_2 -6alkenyl or C_2 -6alkynyl;

R⁴ is independently selected from halogen, nitro, CHO, CN, OC₁₋₆alkylCN, OR⁶, OC₁₋₆alkylOR⁶, fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, NR⁶R⁷, OC₁₋₆alkylNR⁶R⁷, NR⁶OR⁷, CO₂R⁶, OC₁₋₆alkylCO₂R⁶, CONR⁶R⁷, OC₁₋₆alkylCONR⁶R⁷, OC₁₋₆alkylNR⁶(CO)R⁷, NR⁶(CO)R⁷, O(CO)NR⁶R⁷, NR⁶(CO)OR⁷, NR⁶(CO)NR⁶R⁷, O(CO)OR⁶, O(CO)R⁶, COR⁶, OC₁₋₆alkylCOR⁶, NR⁶(CO)(CO)R⁶, NR⁶(CO)(CO)NR⁶R⁷, SR⁶, (SO₂)NR⁶R⁷, OC₁₋₆alkylNR⁶(SO₂)R⁷, OC₀₋₆alkyl(SO₂)NR⁶R⁷, (SO)NR⁶R⁷, OC₁₋₆alkyl(SO)NR⁶R⁷, SO₃R⁶, NR⁶(SO₂)NR⁶R⁷, NR⁶(SO)R⁷, OC₁₋₆alkylNR⁶(SO)R⁷, OC₀₋₆alkylSO₂R⁶, SO₂R⁶, SOR⁶, C₃₋₆cycloalkyl, phenyl, a 5 or 6 membered heteroaromatic ring containing one or more heteroatoms independently selected from N, O, or S, or a 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O, or S which heterocyclic group may be saturated or unsaturated, and said phenyl ring or 5 or 6 membered heteroaromatic ring or 5 or 6 membered heterocyclic ring may optionally be fused with a 5 or 6 membered saturated, partially saturated or unsaturated ring containing atoms independently selected from C, N, O or S wherein any C₃₋₆cycloalkyl, phenyl, 5 or 6 membered heteroaromatic ring with one or two heteroatoms selected independently from N, O, or S or a 5 or 6 membered heterocyclic ring containing one or two heteroatoms selected independently from N, O, or S; may be optionally be substituted by one or more A;

R⁵ is hydrogen or C₁-6alkyl

R⁶ and R⁷ are independently selected from hydrogen, C₁-₆alkyl, C₂-₆alkenyl, C₂-₆alkynyl, C₀-₆alkylC₃-₆cycloalkyl, C₀-₆alkylaryl, C₀-₆alkylheteroaryl and C₁-₆alkylNR⁸R⁹;

R⁶ and R⁷ may together form a substituted 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O or S, which heterocyclic ring may be optionally substituted by A and wherein a CH₂ group may optionally be replaced by a CO group; R⁸ and R⁹ are independently selected from hydrogen, C₁-6alkyl, C₂-6alkenyl, C₂-6alkynyl, C₀-6alkylC₃-6cycloalkyl, C₀-6alkylaryl and C₀-6alkylheteroaryl;

R⁸ and R⁹ may together form a 5 or 6 membered heterocyclic ring containing one or more heteroatoms selected from N, O or S, which heterocyclic ring may be optionally substituted by A;

Hal is halogen;

n is 0, 1, 2, 3 or 4;

A is halogen, oxo (=O), nitro, CHO, CN, OR^6 , $C_{1\text{-}6}$ alkyl, $C_{2\text{-}6}$ alkenyl, $C_{2\text{-}6}$ alkynyl, $C_{0\text{-}6}$ alkyl $C_{3\text{-}6}$ cycloalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, $C_{0\text{-}6}$ alkyl NR^6R^7 , $OC_{1\text{-}6}$ alkyl NR^6R^7 , CO_2R^8 , $CONR^6R^7$, $NR^6(CO)R^6$, $O(CO)R^6$, COR^6 , SR^6 , $(SO_2)NR^6R^7$, $(SO)NR^6R^7$, SO_3R^6 , SO_2R^6 or SOR^6 ; as a free base or a salt, solvate or solvate of a salt thereof.

29. (Original) A compound according to claim 28, wherein

Y is CONR⁵;

X is N;

Q is C_1 -6alkyl;

R⁴ is independently selected from CN, OR⁶, a 5 or 6 membered heteroaromatic ring containing one or more heteroatoms independently selected from N, O, or S, or a 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O, or S which heterocyclic group may be saturated or unsaturated, wherein any 5 or 6 membered heterocyclic ring containing one or two heteroatoms selected independently from N, O, or S; may be optionally be substituted by A;

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R⁵ is hydrogen;

 R^6 is, C_1 -6alkyl;

n is 1;

A is oxo (=0);

as a free base or a salt, solvate or solvate of a salt thereof.

30. (Original) A compound which is

3-Amino-6-bromo-*N*-(2-morpholin-4-ylethyl)pyrazine-2-carboxamide;

3-Amino-6-bromo-*N*-[2-(1*H*-imidazol-4-yl)ethyl]pyrazine-2-carboxamide;

3-Amino-6-bromo-*N*-[3-(1*H*-imidazol-1-yl)propyl]pyrazine-2-carboxamide;

3-Amino-6-bromo-*N*-(2-thien-2-ylethyl)pyrazine-2-carboxamide;

3-Amino-6-bromo-*N*-(thien-2-ylmethyl)pyrazine-2-carboxamide;

3-Amino-6-bromo-*N*-(2-methoxyethyl)pyrazine-2-carboxamide;

3-Amino-6-bromo-*N*-(3-methoxypropyl)pyrazine-2-carboxamide;

3-Amino-6-bromo-*N*-[3-(2-oxopyrrolidin-1-yl)propyl]pyrazine-2-carboxamide;

3-Amino-6-bromo-*N*-(cyanomethyl)pyrazine-2-carboxamide;

as a free base or a salt, solvate or solvate of a salt thereof.

31. (Original) A compound of formula XXII

(XXII)

wherein:

Z is N;

X is CH or N;

P is phenyl or a 5 or 6 membered heteroaromatic ring containing one or more heteroatoms selected from N, O or S and said phenyl ring or 5 or 6 membered heteroaromatic ring may optionally be fused with a 5 or 6 membered saturated, partially saturated or unsaturated ring containing atoms independently selected from C, N, O or S;

R is CHO, fluoromethoxy, difluoromethoxy, trifluoromethoxy, C_{0-6} alkyl(SO_2)NR 1 R 2 , OC_{0-6} alkyl(SO_2)NR 1 R 2 , OC_{1-6} alkyl(SO_2)NR 1 R 2 , OC_{1-6} alkyl(SO_2)NR 1 R 2 , OC_{1-6} alkylNR 1 (SO_2)R 2 ,

$$\begin{split} &C_{0\text{-}6}alkyl(SO_2)C_{1\text{-}6}alkylNR^1R^2, OC_{0\text{-}6}alkyl(SO_2)C_{1\text{-}6}alkylNR^1R^2, C_{0\text{-}6}alkyl(SO)C_{1\text{-}6}alkylNR^1R^2, \\ &OC_{1\text{-}6}alkyl(SO)C_{1\text{-}6}alkylNR^1R^2, C_{0\text{-}6}alkylSC_{1\text{-}6}alkylNR^1R^2, OC_{1\text{-}6}alkylSC_{1\text{-}6}alkylNR^1R^2, \\ &OC_{1\text{-}6}alkylNR^1R^2, OC_{1\text{-}6}alkylNR^1R^2, OC_{1\text{-}6}alkylNR^1R^2, OC_{1\text{-}6}alkylNR^1R^2, \\ &OC_{1\text{-}6}alkylNR^1R^2, OC_{1\text{-}6}alkylNR^1R^2, OC_{1\text{-}6}alkylNR^1R^2, \\ &OC_{1\text{-}6}alkylNR^1R^2, OC_{1\text{-}6}alkylNR^1R^2, \\ &OC_{1\text{-}6}alkylNR^1R^2, OC_{1\text{-}6}alkylNR^1R^2, \\ &OC_{1\text{-}6}alkylNR^1R^2, OC_{1\text{-}6}alkylNR^1R^2, \\ &OC_{1\text{-}6}alkylNR^1R^2, \\ &OC_{1\text{-}6}alkylNR^2, \\ \\ &OC_{1\text{-}6}alkylNR^2, \\ \\ &OC_{1\text{-}6$$

 OC_{1-6} alkyl OC_{1-6} alkyl OC_{1-6} alkyl OC_{1-6} alkyl NR^1R^2 , OC_{1-6} alkyl OC_{1-6} alkyl NR^1R^2 ,

C₀₋₆alkylCONR¹⁰R¹¹, OC₀₋₆alkylCONR¹R², OC₁₋₆alkylNR¹R², C₀₋₆alkylNR¹⁰(CO)R¹¹,

 OC_{1-6} alkyl $NR^1(CO)R^2$, C_{0-6} alkyl $NR^{11}(CO)R^{10}$, C_{0-6} alkyl COR^{11} , OC_{1-6} alkyl COR^1 ,

 C_{0-6} alkyl $NR^{10}R^{11}$, C_{0-6} alkyl $O(CO)R^{11}$, OC_{1-6} alkyl $O(CO)R^{1}$, C_{0-6} alkyl $O(NR^{10})NR^{10}R^{11}$,

 $C_{0\text{-}6}alkylC(NR^{11})N(R^{10})_2, OC_{0\text{-}6}alkylC(NR^1)NR^1R^2, C_{0\text{-}6}alkylNR^{10}(CO)OR^{11},\\$

 $OC_{1\text{-}6}alkylNR^1(CO)OR^2, C_{0\text{-}6}alkylNR^{11}(CO)OR^{10}, OC_{1\text{-}6}alkylCN, NR^1OR^2, C_{0\text{-}6}alkyl(CO)OR^8, \\ C_{0\text{-}6}alkylNR^{11}(CO)OR^{10}, OC_{1\text{-}6}alkylNR^{11}(CO)OR^{10}, \\ C_{0\text{-}6}alkylNR^{11}(CO)OR^{10}, \\$

 $OC_{1\text{-}6}alkyl(CO)OR^{1}, NR^{1}(CO)NR^{1}R^{2}, NR^{1}(CO)(CO)R^{2}, NR^{1}(CO)(CO)NR^{1}R^{2}, OR^{12} \ or \ SO_{3}R^{1};$

R¹ and R² are independently selected from hydrogen, C₁-6alkyl, C₂-6alkenyl, C₂-6alkynyl,

 $C_0\text{--}6alkylC_3\text{--}6cycloalkyl,} \ C_0\text{--}6alkylheterocycloalkyl,} \ C_1\text{--}6alkylNR}^6R^7, \ C_0\text{--}6alkylaryl \ and$

 $C_{0\text{--}6}alkylheteroaryl,\ wherein\ any\ C_{1\text{--}6}alkyl,\ C_{2\text{--}6}alkenyl,\ C_{2\text{--}6}alkynyl,\ C_{0\text{--}6}alkylC_{3\text{--}6}cycloalkyl,\ C_{2\text{--}6}alkynyl,\ C_{2\text{--}6$

 C_{0} -6alkylheterocycloalkyl, C_{0} -6alkylaryl, C_{0} -6alkylheteroaryl may be substituted by one or more A;

R¹ and R² may together form a substituted 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O or S, which heterocyclic ring may be optionally substituted by A;

 $R^3 \ is \ independently \ selected \ from \ halogen, \ nitro, CHO, C_{0-6}alkylCN, OC_{1-6}alkylCN, \\ C_{0-6}alkylOR^6, OC_{1-6}alkylOR^6, \ fluoromethyl, \ difluoromethyl, \ trifluoromethyl, \ fluoromethoxy, \ difluoromethoxy, \ trifluoromethoxy, \ C_{0-6}alkylNR^6R^7, OC_{1-6}alkylNR^6R^7, \\ OC_{1-6}alkylNR^6R^7, OC_{1-6}alkylNR^6R^7, OC_{1-6}alkylNR^6R^7, OC_{1-6}alkylNR^6R^7, \\ OC_{1-6}alkylNR^6R^7, OC_{1-6}alkylNR^6R^7, \\ OC_{1-6}alkylNR^6R^7, OC_{1-6}alkylNR^6R^7, \\ OC$

OC₁₋₆alkylOC₁₋₆alkylNR⁶R⁷, NR⁶OR⁷, C₀₋₆alkylCO₂R⁶, OC₁₋₆alkylCO₂R⁶, C₀₋₆alkylCONR⁶R⁷,

 $OC_{1\text{-}6}alkylCONR^6R^7, OC_{1\text{-}6}alkylNR^6(CO)R^7, C_{0\text{-}6}alkylNR^6(CO)R^7, O(CO)NR^6R^7, NR^6(CO)OR^6, NR^6(CO)NR^6R^7, O(CO)OR^6, O(CO)R^6, C_{0\text{-}6}alkylCOR^6, OC_{1\text{-}6}alkylCOR^6, NR^6(CO)(CO)R^6, NR^6(CO)(CO)NR^6R^7, SR^6, C_{0\text{-}6}alkyl(SO_2)NR^6R^7, OC_{1\text{-}6}alkylNR^6(SO_2)R^7, OC_{0\text{-}6}alkyl(SO_2)NR^6R^7, C_{0\text{-}6}alkyl(SO)NR^6R^7, OC_{1\text{-}6}alkyl(SO)NR^6R^7, SO_3R^6, C_{0\text{-}6}alkylNR^6(SO_2)NR^6R^7, C_{0\text{-}6}alkylNR^6(SO)R^7, OC_{1\text{-}6}alkylNR^6(SO)R^7, OC_{0\text{-}6}alkylSO_2R^6, C_{0\text{-}6}alkylSO_2R^6, C_{1\text{-}6}alkylNR^6, C_{2\text{-}6}alkylNR^6, C_{2\text{-}6}alkylN$

R⁶ and R⁷ are independently selected from hydrogen, C₁-₆alkyl, C₂-₆alkenyl, C₂-₆alkynyl, C₀-₆alkylC₃-₆cycloalkyl, C₀-₆alkylaryl, C₀-₆alkylheteroaryl and C₁-₆alkylNR⁸R⁹;

 R^6 and R^7 may together form a substituted 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O or S, which heterocyclic ring may be optionally substituted by A and wherein a CH_2 group may optionally be replaced by a CO group; R^8 and R^9 are independently selected from hydrogen, $C_{1\text{-}6}$ alkyl, $C_{2\text{-}6}$ alkenyl, $C_{2\text{-}6}$ alkynyl, $C_{0\text{-}6}$ alkyl $C_{3\text{-}6}$ cycloalkyl, $C_{0\text{-}6}$ alkylaryl and $C_{0\text{-}6}$ alkylheteroaryl;

R⁸ and R⁹ may together form a 5 or 6 membered heterocyclic ring containing one or more heteroatoms selected from N, O or S, which heterocyclic ring may be optionally substituted by A;

$$\begin{split} R^{10} \text{ is hydrogen, } C_{1\text{-}6}\text{alkyl, } C_{2\text{-}6}\text{alkenyl, } C_{2\text{-}6}\text{alkynyl, } C_{0\text{-}6}\text{alkyl}C_{3\text{-}6}\text{cycloalkyl, } \\ C_{0\text{-}6}\text{alkylaryl, } C_{0\text{-}6}\text{alkylheteroaryl or } C_{1\text{-}6}\text{alkylNR}^8R^9; \end{split}$$

 R^{11} is C_{1} -6alkylNR $^{8}R^{9}$;

R¹⁰ and R¹¹ may together form a 5 or 6 membered heterocyclic ring containing one or more heteroatoms selected from N, O or S, which heterocyclic ring may be optionally substituted by A;

A is halogen, oxo (=O), nitro, CHO, CN, OR⁶, C₁₋₆alkyl, C₂₋₆alkenyl, C₂₋₆alkynyl, C₀₋₆alkylC₃₋₆cycloalkyl, fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, C₀₋₆alkylNR⁶R⁷, OC₁₋₆alkylNR⁶R⁷, CO₂R⁸, CONR⁶R⁷, NR⁶(CO)R⁶, O(CO)R⁶, COR⁶, SR⁶, (SO₂)NR⁶R⁷, (SO)NR⁶R⁷, SO₃R⁶, SO₂R⁶ or SOR⁶; m is 0, 1, 2, 3 or 4;

as a free base or a salt, solvate or solvate of a salt thereof.

32. (Original) A compound according to claim 31, wherein:

X is N;

P is phenyl;

R is C₀₋₆alkyl(SO₂)NR¹R²;

R¹ and R² may together form a substituted 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O or S;

m is 0;

as a free base or a salt, solvate or solvate of a salt thereof.

33. (Original) A compound which is

Methyl 3-{[2,6-dimethoxy-4-(2-phenylethoxy)benzyl]amino}-6-[4-(pyrrolidin-1-ylsulfonyl)phenyl]pyrazine-2-carboxylate polystyrene;

 $3-\{[2,\!6-\!Dimethoxy-\!4-\!(2-\!phenylethoxy)benzyl]amino\}-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino\}-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino\}-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1-\!phenylethoxy)benzyl]amino]-6-[4-\!(pyrrolidin-1--$

ylsulfonyl)phenyl]pyrazine-2-carboxylic acid polystyrene;

as a free base or a salt, solvate or solvate of a salt thereof.

34. (Cancelled).